



Faculty Newsletter

Message from the Dean

Welcome back for the second semester. Despite the challenges we have faced over the past year, our staff and students have continued to do excellent work, and the newsletter is full of their achievements.

It was fabulous to be part of a graduation ceremony in the Sarah Baartman Hall and to see family and friends celebrating with the PhD graduates. Well done to all the supervisors.

Applications for undergraduate study close on 31 July 2023. The faculty office has so far received over 17 000 applications, and has made 2338 conditional offers. The University Admissions Office is planning a face-to-face event for applicants on 8 October to showcase the faculties and to encourage students to take up their offers so we can meet our targets across the university.

The second faculty assembly is taking place on Monday, 1 August, where we will again engage with the university executive around registration and the broader UCT systems and processes. It is a hybrid event to ensure that all staff concerned can attend.

On Wednesday, 27 July, the VC and the faculty hosted the RISE programme, which supports brilliant young people worldwide. Thank you to everyone who participated and put a programme together to inspire and motivate this talented group of bright young minds.

I hope you will join us on 3 August for the faculty soup get-together. It is an opportunity to catch up with colleagues and meet new staff from across the faculty.

Wishing you all the best for the second semester.

NSTF-32 awards winner

Congratulations to Professor Marianne Vanderschuren who was announced as the winner of the NSTF-32 Special Theme Award for her outstanding contribution to science, engineering and technology (SET) and innovation. The award acknowledges the role she plays in improving the quality of life of vulnerable road users using Smart Mobility through research solutions based on the basic sciences.

Marianne's research focuses on transport improvements for vulnerable road users, resulting in more than 5,000 lives being saved since 2009. She is an international leader in her field, and her considerable research outputs and capacity development initiatives have been recognised by her



Dr Glenda Gray, Professor Marianne Vanderschuren and Dr Phil Mjwara, DG Department Science and Technology

election as a Fellow of the South African Institution of Civil Engineering, as a Fellow of the Institution of Civil Engineers UK (one of 63 in Africa) and by the DSI-NRF/CSIR Smart Mobility

Research Chair award. For 2022, she was appointed President of the South African Institute of Civil Engineering. Read more in the [Mail & Guardian](#)

Exhibiting at Guggenheim Museum Bilbao

An automobility project by academics, students and alumni from the School of Architecture, Planning and Geomatics is currently part of a Futures Gallery in an exhibition at the Guggenheim Museum in Bilbao, Spain

The familiar sight of children playing with a tyre under the African sun was the starting point of this design project undertaken by a team of UCT academics, students and alumni who gave expression to the U+ mobility unit – a futuristic mono-vehicle.



The U+ is a blue-sky, conceptual proposition and does not factor in a means of propulsion. However through its conceptualisation and design it provides a blue-sky response to the historic, socio-political and socio-economic issues that continue to impact on mobility in Africa in general and in Cape Town in particular.

The concept of the U+ was born out of a rapid design studio made up of APG students Emma Bracher, Tankiso Hantsi, Divine Masako, Dineo Mogotsi and Paul Richardson. In essence the concept mirrors a big moving tyre, explained the project's co-lead and architecture lecturer dr philippa tumubweinee*.

“As a child, in most parts of Africa, you play with and push around a tyre. Sometime with sticks, sometimes with your hands. The idea of the U+ is that as you grow up, you slip into the tyre that you played with as a child and then you can move around,” she said of the 2.6 metre high mobility unit prototype that resembles the iconic tyre.

Professors Edgar Pieterse, Director of African Centre for Cities, and tumubweinee led the project and facilitated the process from its inception to fabrication and installation at the Guggenheim Museum. Alongside dr heeten bhagat* and Daniel Xu, they managed the process including the installation of the U+ prototype as a part of the Futures Gallery in the Motion, Autos, Art and Architecture exhibition

by the Norman Foster Foundation that opened on 8 April, 2022.

Coming up with the design for the modular mobility units was a lot of fun and was the result of lively discussion and debate among the team members, says tumubweinee. It also helped exercise the team members' collective design-thinking and critical-thinking skills.

To focus the students' minds on the project, Pieterse, tumubweinee, bhagat and Xu established an experimental environment in which students were exposed to some of the problems South Africans face with finding dependable and safe modes of public transport. solutions.



The U+ prototype is on display at the “Motion, Autos, Art and Architecture” exhibition by the Norman Foster Foundation at the Guggenheim Museum in Bilbao. Standing at 2.5 m high is the centrepiece of an installation that weighs approximately 500 kg and stands at 12 m high.

[Read more](#)

**names requested in lower case*

Prestigious Researchship

Associate Professor Dyllon Randall of the Future Water Institute will take up a prestigious August T Larsson Guest Researchship at the Swedish University of Agricultural Sciences in Uppsala, Sweden. This will strengthen the institutions' collaborative research on circular sanitation technologies, specifically using human urine to make fertilisers.

Dyllon will be based at the university's Faculty of Natural Resources and Agricultural Sciences. The August T Larsson Foundation Guest Researcher initiative was established in 2011 to strengthen links with established guest researchers working within strategic fields.

He will spend one month per semester at the faculty over three years, teaching, supervising and working with



researchers at the faculty.

[Read more](#)

Decarbonising the aviation sector



Professor Michael Claeys, director of the DSI-NRF Centre of Excellence in Catalysis is the UCT principal investigator and part of a research group from South Africa and Germany, who are led by Sasol and the Helmholtz-Zentrum Berlin (HZB) to develop and optimise next-generation catalysts that will play a key role in decarbonising the aviation sector through sustainable aviation fuels (SAF).

The launch of the research project, known as CARE-O-SENE (Catalyst Research for Sustainable Kerosene) took place on 24 May which President Cyril Rampahosa, and German Chancellor Olaf Scholz attended. Other CARE-O-SENE project partners include the Fraunhofer Institute for Ceramic Technologies and Systems, the Karlsruhe Institute of Technology, and INERATEC GmbH. They join forces to accelerate the development of catalysts that are essential to produce green kerosene on a commercial scale through Fischer-Tropsch technology (FT).

CARE-O-SENE will run for three years and pursues the goal of setting the course for large-scale commercialisation of green kerosene production by 2025 with its research

on catalysts. Catalysts are used to speed up chemical reactions, increase the yield and improve the quality of refined products. The new FT catalysts are expected to increase the fuel yield of the process to over 80 percent, thereby optimising use of resources.

Unlike conventional kerosene derived from fossil feedstocks, SAF can be made from green hydrogen and sustainable carbon dioxide sources. Developing SAF is key to a sustainable decarbonisation of the hard-to-abate aviation industry, and the main lever for net zero aviation. The underlying technology to developing SAF at scale from green hydrogen and sustainable carbon sources is FT technology, in which Sasol has been a global leader for more than 70 years.

Article in prestigious journal *Angewandte Chemie*

Professor Eric Van Steen and six of his students (Singobile Mahlaba, Nasseela Mahomed, Alisa Govender, Junfeng Guo, Gerard Leleba and Pierre Cilliers) from the Catalysis Institute have recently published an article in the prestigious journal *Angewandte Chemie*, one of the prime chemistry journals in the world.

Methane is a major component in natural gas and biogas. Its chemical structure makes it one of the most difficult molecules to activate in a controlled manner; hence, it is mainly used for heating or generating power. Methane can be used as a feedstock for the chemical industry, but it typically involves the high temperature conversion of methane to synthesis gas, which can be subsequently transformed in a high-pressure process to methanol and

formaldehyde. Direct oxidation of methane yielding value-added products such as formaldehyde is a challenge due to potential overoxidation, but a theoretical study indicated that it would be possible to avoid over-oxidation by finding suitable reaction conditions. The experimental team started therefore exploring the oxidation of methane in the presence of water, showing that

the conversion of methane in the presence of water does yield selectively formaldehyde. This is the first controlled process for the conversion of methane to formaldehyde. Researchers at the Catalysis Institute are currently exploring and have succeeded in improving the activity of the catalysts. This development will bring the value-addition of methane a step closer.

Angewandte
International Edition **Chemie**

GDCh

A Journal of the
German
Chemical Society

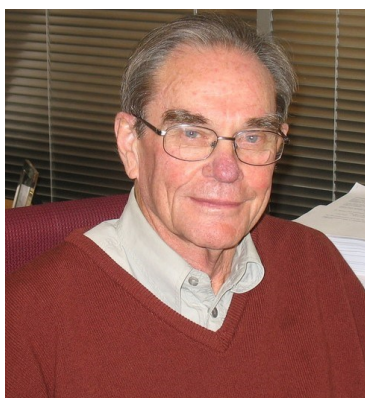
Research Article |  Open Access

Platinum-Catalysed Selective Aerobic Oxidation of Methane to Formaldehyde in the Presence of Liquid Water

Singobile V.L. Mahlaba, Nasseela Lal Hytoolakhan Mahomed, Alisa Govender, Junfeng Guo, Gerard M. Leteba, Pierre L. Cilliers, Eric van Steen 

First published: 27 July 2022 | <https://doi.org/10.1002/anie.202206841>

Obituary



On Saturday 25 June 2022, a leading figure in the field of Fischer-Tropsch catalysis, Professor Mark Dry, died.

From 1994 to 2014, Mark was an honorary professor in the Department of Chemical Engineering. In December 2007, he became the first person in chemical engineering to be awarded an honorary doctorate by UCT.

Professor Dry obtained his first degree from Rhodes University and completed his PhD at Bristol University. He was hired by SASOL in 1956 to develop the catalysts they needed to use in the plants they were designing to make oil from coal. The Fischer-Tropsch process, which Mark became an expert in, is all

about squeezing oil out of coal (or gas). Under Mark Dry, SASOL was to develop the capacity, at SASOL to extract oil more efficiently from coal and [subsequently at Moss gas] from gas, than anywhere else on earth.

His paper on the Fischer-Tropsch Process: 1950-2000 earned the accolade for the most frequently cited paper from *Catalysis Today* (which circulates to over 5000 institutes worldwide) from 2001-2006. Well into his seventies, Mark continued publishing papers, and teaching students at UCT.

News in brief



Amber Abrams, a research fellow in the Future Water Institute, is a finalist in the Falling Walls Lab Science Engagement category for her work with the Museum of Watery Relation. The project engages citizens of South Africa (especially those in Cape Town) with the aim of collaboratively developing an online interactive map of the various water samples/stories submitted.

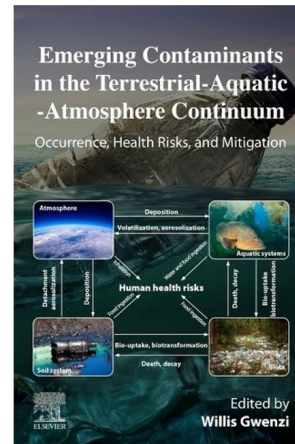
The Department of Construction Economics and Management hosted a successful accreditation visit by the South African Council for the Property Valuer Profession. The BSc/ BSc (Hons) Property Studies and the MSc Property studies have received full accreditation for the next five years. This allows students to not only work in all areas of the property industry, but also enables them to become a professional property valuer.



UCT
school of
architecture,
planning &
geomatics

The Planning programme in the School of Architecture, Planning & Geomatics hosted a successful accreditation visit by the South African Council for Planners (SACPLAN), the national accreditation body for the planning profession. The 1+1 planning degree programme received full accreditation for the next five years. SACPLAN noted that the programme "complies with, and in certain instances, exceeds" SACPLAN's standards

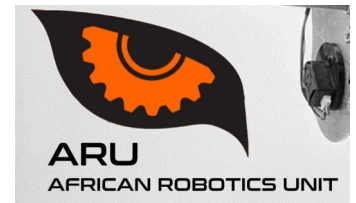
The Planning programme in the School of Architecture, Planning & Geomatics hosted a successful accreditation visit by the South African Council for Planners (SACPLAN), the



A/Professor Kirsty Carden from the Future Water Institute together with Oluwademilade Fayemiwo, (a postdoctoral fellow with Future Water at the time), were invited to write a chapter for the book *Emerging contaminants in Terrestrial and Aquatic Environments: Occurrence, Health risks and Mitigation*. The chapter is an overview of the 'state of play'

with regard to how developing countries are responding to the increasing challenges associated with contaminants of emerging concern in water systems, i.e. pharmaceuticals, micro-plastics etc.

A/Professor Amir Patel, Dr Paul Amayo, and Stacey Shield, a PhD candidate from the African Robotics Unit in the Department of



Electrical Engineering put the spotlight on Africa by presenting at the 2022 IEEE International Conference on Robotics & Automation in Philadelphia, USA, which is the top-ranked conference in the field of robotics. Amir was an invited speaker at the 6th workshop on Legged Robots and presented alongside some of his personal heroes.



A/Professor Kathy Michell was recently elected as the chair of the Royal Institution of Chartered Surveyors (RICS) oversight group which has been established to steer diversity, equity and inclusion initiatives

focused on building a culture of accountability and belonging, and ensuring the membership and profession better reflect the societies they serve.

Understanding African Real Estate Markets

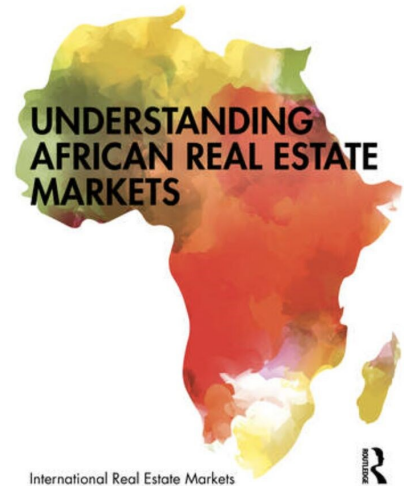
A/Professor Francois Viruly from the Department of Construction Economics and Management has edited a book with A/Professor Aly Karam, from School of Architecture and Planning at the University of Witwatersrand, **Catherine Kariuki**, a lecturer at the Department of Real Estate, University of Nairobi and **Victor A. Akujuru**, a Professor at Rivers State University in Nigeria.

This book brings together a broad range of research that interrogates how real estate market analysis, finance, planning, and investment for residential and commercial developments across the African continent are undertaken. In the past two decades, African real estate markets have rapidly matured,

creating the conditions for new investment opportunities which has increased the demand for a deeper understanding of the commercial and residential markets across the continent. The chapters consider issues that pertain to formal real estate markets and the critical relationship between formal and informal property markets on the continent.

With contributing authors from South Africa, Ghana, Nigeria, Uganda, Kenya, and Tanzania, the book considers the achievements of African real estate markets while also highlighting the complex central themes such as underdeveloped land tenure arrangements, the availability of finance in both the commercial and

EDITED BY ALY KARAM, FRANÇOIS VIRULY,
CATHERINE KARIUKI AND VICTOR AKUJURU



residential sectors, rapidly growing urban areas, and inadequate professional skills.

Genie Visiting Faculty Award



A/Professor Tanja Winkler from Planning in the School of Architecture,

Planning & Geomatics, is the 2022 recipient of the *Genie Visiting Faculty Award* at Chalmers University of Technology, Gothenburg, Sweden. The award is conceptualised as a “Gender Initiative for Excellence”, and is aimed at improving gender balances in departments, providing role models and international contacts for students and faculty, and supporting excellence in research. The initiative is funded by the Chalmers University of Technology Foundation.

Tanja spent April and May 2022 in the Department of Architecture and Civil Engineering where she participated in

studio-based courses on affordable housing, facilitated lectures on urban and spatial inequalities, examined master’s dissertations, established international connections between Chalmers and UCT, and completed a research project on “power and planning” with colleagues based at Chalmers. Experiences gained during her stay inform her current studio-based project on affordable housing in Cape Town. This studio project, which commences in the second semester, is co-facilitated with the social justice NGO, Ndifuna Ukwazi.

Alumni news

First South African to achieve double summit



Within 24 hours, Remy Kloos, a 2011 property studies honours graduate, summited Mount Everest (8848m) on 15 May, and its near neighbour Mount Lhotse (8516m) on 16 May 2022. She became the first South African to do the double summit and the first South African woman to summit Mount Lhotse. Remy describes how at the age of 17, she was diagnosed with

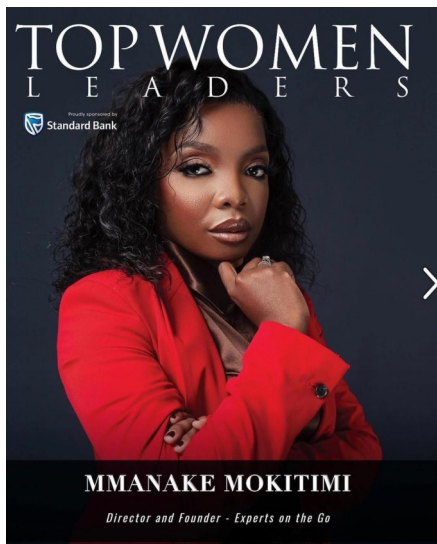
depression and needed to find a coping mechanism to manage her mental health. She discovered mountain climbing, and in 2017, she achieved her first major summit, conquering Mount Kilimanjaro, a turning point in her fight for mental health.

New DG for DMRE



Jacob Mbele, a 1999 electrical Engineering graduate was announced as the Department of Mineral Resources and Energy's new DG. He has served as the chief director for electricity in the former Department of Energy and later became the deputy director for energy programmes and projects in DMRE.

Stand Bank Top Women Leader



In 2015, Manake Mokitmi, under the supervision of Professor Marianne Vanderschuren, graduated with her master's degree from the Centre for Transport Studies. She was recently named as one of [Standard Bank's Top Women Leaders](#) for her role as director and founder of Experts On the Go, an engineering consulting firm with expertise in traffic engineering, transport planning and project management

Design thinking helped successful entrepreneur



Ntsako Mgiba, a 2017 Mechatronics graduate, is the founder of Jonga, a community-based security system, providing affordable & effective protection for communities. In a recent article in the Mail & Guardian, Ntsako shares his journey with design thinking and how he has used it for user-centred design principles to develop solutions for the most resource-constrained users in the country.

Ntsako is presently also the product manager at YOCO, an African technology company that creates opportunities for entrepreneurs to get paid and be more successful. Read more in the [Mail & Guardian](#)

Alumni news

New CEO

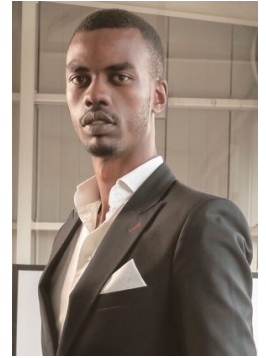


Dr Rethabile Melamu graduated with her PhD in Chemical Engineering in 2014. She has been appointed as the new CEO of South Africa's solar industry representative body, the South African Photovoltaic Industry Association. She takes on her role at a critical time in South Africa's energy transition with the country set to procure close to 6GW of new solar energy capacity in this decade alone. Dr Melamu was

most recently general manager of Green Economy at The Innovation Hub where she managed a portfolio of 40 green economy start-ups..

MechEng Entrepreneur

Brendan Fernánedz started his entrepreneurial career in 2016 when he started Kits on Campus, providing well-priced drawing equipment for engineering students. Brendan graduated in 2017 and is now the founder and CEO of Graf-in Tech, one of the COJ Smart City Innovation Challenge winners. Graf-in Tech builds customer-tailored innovative technology solutions and offers services to solve critical social, economic, and environmental challenges worldwide. Brendan said, "UCT really ignited my passion for innovation and provided me with the relevant skills I needed. I highly appreciate your support and encouragement."



Mail & Guardian Top 200

Technology & Innovation category



Maloba Tshehla graduated in 2011 with a BSc in chemical engineering. He is head of strategy & growth and spokesperson for the E D Platform and South African Photovoltaic Industry Association. The ED Platform is a development economic adviser for a range of diverse role players in the renewable

energy and mining sectors.

[M & G website](#)

Confidence Tshilande, a 2018 master's in geotechnical engineering graduate, is the founder and director of Prestiio, a social media and networking platform exclusively developed for women where they can safely interact, connect, inspire and uplift each other. She's an engineer by profession. [M & G website](#)



Support for PAD drive



The Department of Mechanical Engineering staff supported the EBE undergraduate student council's drive for sanitary pads which they collected and distributed to EBE female students.

Professor Brandon Collier-Reed handed the donations to Siphesande Mabangula, the chair of the EBESC.

Mail & Guardian Top 200

Education Category

Lemohang Monyatsi completed his master's degree with the Centre for Transport Studies in 2020, and is currently registered for his PhD under the supervision of Prof Marianne Vanderschuren. He manages road safety engineering at the Road Traffic Management Corporation, an agency of the department of transport where he formulates policies to ensure South African roads are safer. [M & G website](#)



Masoi Mhlophe, a 2016 chemical engineering graduate founded BraYn Tutoring in 2015 to create an efficient world-class education system that leaves no one behind; one that engages and prepares all BraYniacs for tertiary education, and one that removes the English-language barrier by providing mother-tongue mnemonics on Physical Sciences and Mathematics study notes. [M & G Website](#)



Corobrik Student Architecture Award

In June 2022, Mpho Sephelane, a 2021 architecture master's graduate, was announced as the 2021 Corobrik Student Architecture Award winner. The winner receives R70 000 cash prize. Corobrik started the awards in 1986 to give the up-and-coming architecture students a platform to showcase their architectural talent and creativity.

Mpho was one of eight regional finalists who presented their thesis to a panel of judges. Mpho's thesis was titled 'Re[covering] Place: African ways of seeing, thinking and making as a call to rethink and remake places in cities'. The judges' citation stated that Mpho "shifted our mindsets to trust our heritage to guide us and to be truly authentic. She narrated the use of the Basotho blanket as a transformative

and imaginative symbol of identity and relevance."

"The opportunity afforded to me has validated a lot of what my fellow students, especially people who connect with their culture, have been struggling with, and that is the issue of translating who they are and what their culture entails and the values they bring to their everyday lives and professions," said Mpho. "The journey is really a beginning for me as I am excited to continue to collaborate and learn from other cultures about such ideas of translation and preservation."



Mpho Sephelane and CEO of Corobrik, Nick Booth

JSE Investment Challenge win

Shreya Gopaulsingh and Megan Greggor, second-year mechanical and mechatronics students used their analytical powers to participate in the annual Johannesburg Stock Exchange's (JSE) Investment Challenge. They won in the "Speculator portfolio for universities" category for April and May.

The annual JSE Investment Challenge is the exchange's flagship youth corporate social investment programme that aims to teach South African learners and students about investing on the JSE and the larger role that such investment plays in the country's economy.

Through the challenge, participants get to test their share trading skills through a simulated "ghost trading" programme. Each team is given a virtual sum of R1 million to invest in JSE-listed shares, their performance is tracked and



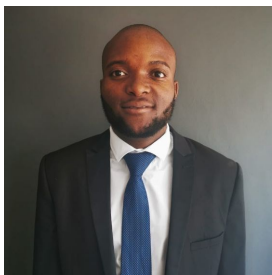
Megan Greggor and Shreya Gopaulsingh

measured against other teams taking part in the challenge .

[Read more](#)

EBE entrepreneurs

Three out of the eight UCT entrepreneurs' going into the regional round for the Entrepreneurship Intersarsity competition are from EBE. The regional round of the competition will be hosted by Cape Peninsula University of Technology in August.



Victor Xaba, a 2019 chemical engineering graduate, and this year doing a PGDip in Entrepreneurship, established HemPad South Africa, a social enterprise that aims to directly address inequitable access to safe, high-quality and affordable sanitary products.



Patrick Rankhumise, a third-year electrical engineering student, founded Universitrade, an e-commerce platform, which enables university students to buy and sell goods directly to each other.



Matimba Mabonda's initiative LolaGreen to makes a difference to the environment by collecting plastic waste found on landfills and in other parts of the environment and converting it into durable roof tiles. Matimba is a Chemical Engineering master's student.

Prize awarded to ChemEng spin-off company HYENA

Africa Prize finalist Jack Fletcher has been awarded a prize of £10,000. Jack and his team recently spoke to [Engineering News](#) about the HYENA POWER POD, a fuel-cell based hydrogen generator that converts liquid petroleum gas into usable electricity, all within one device. The HYENA team developed the POWER POD as a way to deploy fuel cell technology into Africa, where hydrogen distribution is all but non-existent. Find out more about HYENA and watch Jack's finalist pitch on the [Africa Prize Interactive Showcase](#).

NEW STAFF

Ms Andrea Alexander joined the Faculty Office as an undergraduate administrator assistant from 7 July 2022. Andrea will be responsible for the Electrical Engineering, Construction and Property Studies and Civil Engineering programmes.

Mr Khaya Salman joined the Faculty Office as the postgrad admin assistant from 1 July. Kaya replaces Jamie-Lee Swarts who resigned and left to join the Department of Construction Economics and Management as their undergraduate administrator



Mr Clint Prinsloo joined the Chemical Engineering Workshop on 1 June 2022.

Mr Lorenzo Plat joined Civil Engineering in the finance and operations section on 1 May 2022.

RESIGNATIONS

Mr Neils Luchters from the Centre for Catalysis left on 30 June 2022

Dr Naomi Roux from the School of Architecture, Planning & Geomatics left at the end April 2022.

A/Professor Julian Smit from the Division of Geomatics left at the end May 2022.

Dr Jane Wyngaard from the Department of Electrical Engineering left at the end of June 2022

EBE WINTER SOCIAL

Staff Soup Day



LET'S MAKE THE MOST OF THE COLDER WEATHER WITH A WARM, SOUP GET-TOGETHER!

BRING YOUR BOWL/MUG AND JOIN US IN THE **NEB FOYER** FOR SOME DELICIOUS SOUP AND CONVERSATION.

WEDNESDAY 3RD AUGUST

13H00-14H00

RSVP BY FRIDAY 29TH JULY

RSVP Candice.Lowin@uct.ac.za

Farewell

A final farewell was held for Julie Thompsett who had retired at the end of 2021, but had been asked to stay on to assist with the Department of Construction Economics and Management's accreditation visit. Warda Samaai is the new departmental manager for the department.



Professor Keith Cattell, Julie Thompsett and Warda Samaai

Congratulations

Congratulations to Lumka Johannes and her husband Jiyana on the birth of their son, Izibele, born on 13 May 2022.

Proud older brothers, Ndibonga and Avuyile, admiring their baby brother.



International award for electrical postgrads

NextGen Engineers, a team of three students from the University of Cape Town (UCT), have won an international award for their affordable engineering essentials toolkit tailored to students' needs.

The winners of the RS Components Grass Roots Engineering Essentials Kit international design competition are Kai Goodall, Pitambar Akshay Jankee and Sampson Ebuka Nwachukwu. The NextGen Engineers trio are all postgraduate students from UCT's Department of Electrical Engineering.



Pitambar Jankee, Sampson Nwachukwu, and Kai Goodall

Their toolkit (its catchy name is CirKit) took the honours in a competition contested by other top young international innovators. The runners-up are the University of Loughborough and the Engineering & Design Institute London (TEDI-London) in the United Kingdom.

Goodall is doing his master's in electrical engineering, specialising in mechatronics. He has a strong history of social innovation with his international award-winning Pedal n Spin foot-cranked washing machine and his Tap

and Door Opener (TDO) Multi-tool for COVID-19 spread prevention. Goodall's research interests include automation through artificial intelligence and computer vision as well as renewable energy technologies.

Jankee is a Mauritian doing his PhD in electrical engineering. His research is funded by the Open Philanthropy Project and the UCT Innovation Builder Fund. His research interests include geomagnetically induced currents, power system stability and control,

protection and automation, power theory and converter-interfaced generation.

Nwachukwu is a Mastercard Foundation (MCF) Scholar from Nigeria doing his master's in electrical engineering. Nwachukwu's main interests are in renewable energy, microgrids, and power systems stability, covering concepts such as the use of machine learning to predict energy outputs and flow analysis of current and emerging energy technologies. [UCT News](#)

CMR's Mandela Day contribution

On 18 July, to celebrate Mandela Day, staff and students from the Centre for Minerals Research went out to plant a food garden at Jo's School in Vrygrond. Shireen Govender organised them to team up with the Montessori Early Learning Foundation and philanthropist Mr Sayed Choonara.

Jo's school caters for children from eighteen months to six years old from the surrounding communities of Vrygrond and Capricorn Park. "They provide a meal to the children daily. Establishing a food garden will go a long way in securing a sustainable food source for the future," said Shireen Govender.



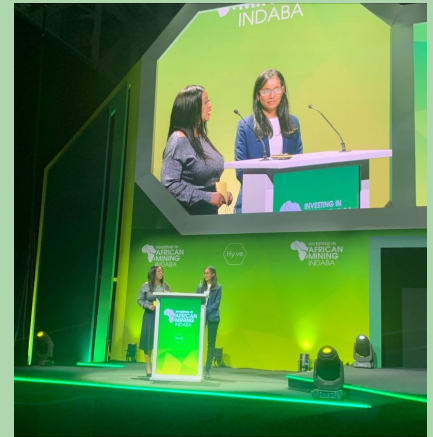
Win at Mining Indaba 2022

In 2022, the Mining Indaba, the largest investment mining conference, introduced a pitch competition to identify innovative and sustainable ideas for the mining industry.

The theme was to provide a solution to building sustainable post-mine economies. Diksha Shilpa Rumjeet and Tapiwa Chimbganda from Minerals to Metals in the Department of Chemical Engineering, were announced as the winners of the inaugural Innovation & Research Battlefield competition. Their work focused on building post-mining

economies and sustaining communities through regenerative agriculture of industrial crops. The prize was an Innovation Grant sponsored by BHP and the Sustainable Minerals Institute.

Diksha said, "We had the incredible opportunity to present our team's work at the Mining Indaba 2022. Mining is often associated with the resource curse phenomenon due to the nature of its activities and the environmental legacies it entails. However, the tech industry and the move to renewables will increasingly require metals, so our

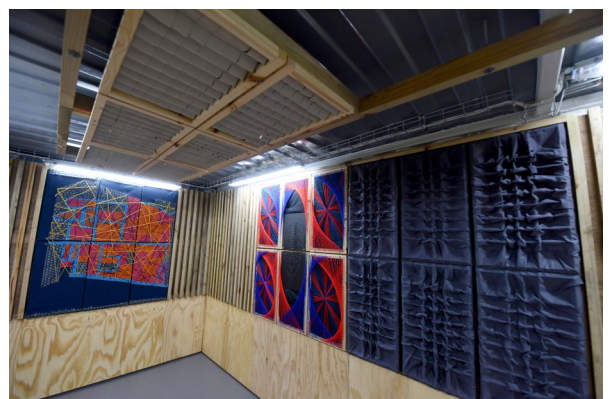


dependency on metals and mining is not ending anytime soon."

Rebuilding the Langa Theatre

Clint Abrahams and the 2021 and 2022 BAS2 students have completed two design-build projects in the community of Langa as part of rebuilding the Langa theatre that was damaged in 2020 by a fire. The work also saw the continued collaboration with some of the stakeholders of the Macassar 2019 project and shows a continued commitment to teaching architecture through making while creating tangible outcomes beyond desktop research in terms of social responsiveness.

The completion of the ceiling and the sound studio is an astronomical feat considering the impact of the Covid-19 pandemic on studio culture. Several students expressed their pride in the project and commented that the project was challenging but exciting while boosting the studio morale and keeping them motivated. Many students were inspired by how making in architecture could be used as a tool to instil a sense of empathy for others. With the overall completion of the theatre expected in August, many anticipate that the theatre will bring new life and energy back to the cultural precinct in Langa where locals and visitors can come together and continue to share experiences around the arts.



PhD graduation July 2021

Congratulations to the PhD graduates who were awarded their degrees on Friday 21 July.



Trevor Cloete, a senior lecturer in the Department of Mechanical Engineering.

Sherlyn Gabriel from the Department of Mechanical Engineering. Read her story on [UCT News](#)



- Kehinde Alade (CEM)
- Benjamin Alheit (Mechanical Engineering)
- Oluwagbenga Apata (Electrical Engineering)
- Bruce Dzenga (Mechanical Engineering)
- Maïen Hamed (Mechanical Engineering)
- Samuel Omogoye (Electrical Engineering)
- Dandré Pienaar (Chemical Engineering)
- Michael Wright (Mechanical Engineering)

EBE Research Awards

20 EBE postgraduate students were awarded research awards for being the lead author in a research paper, which was accepted for a peer-review journal before graduation. The awards were introduced to encourage students to publish papers before graduating.

Student	Department	Supervisor
Emma Horn	Civil Engineering	A/Prof Dyllon Randall
Qin Chen	Electrical Engineering	Prof Komla Folly
Sumbo Oluwatosin	Chemical Engineering	Dr Marijke Fagan-Endres and Dr Siew L. Tai
Tanimi Jatau	Mechanical Engineering	Prof Tunde Bello-Ochende
Grace Muriithi x 2	Electrical Engineering	A/Prof Sunetra Chowdhury
Daniel Joska	Electrical Engineering	A/Prof Amir Patel
Hlumelo Marepula	Civil Engineering	A/Prof Dyllon Randall
Naomi Harrisankar	Chemical Engineering	Professor Eric van Steen & A/Professor Pieter Leveque
Kehinde Alade	Construction Economics & Management	Prof Abimbola Windapo
Renita Raidoo	Mechanical Engineering	A/Prof Ryno Laubscher & Prof Pieter Rousseau
Shai Kadish	Electrical Engineering	Prof Ed Boje
Joanitta Ndawula	Civil Engineering	Prof Hans Beushausen
Caitlin Courtney X 3	Civil Engineering	A/Prof Dyllon Randall
Brad Travis Rawlins	Mechanical Engineering	Prof Pieter Rousseau and A/Prof Ryno Laubscher
James Dicks	Mechanical Engineering	Dr Chris Woolard
Pitambar Jankee	Electrical Engineering	Dr David Oyedokun
Dominic de Oliveira	Chemical Engineering	Prof Michael Claeys

Generating solar power

UCT's Energy Systems Research Group (ESRG) has been able to complement its theoretical work with some engineering practise. Through its participation in the newly established Transnational Centre for Just Energy, Climate and Sustainability Transitions (TRAJECTS), funding became available to 'touch green energy'. TRAJECTS is funded by the German Academic Exchange Service (DAAD) and supports postgraduate and transdisciplinary exchanges and activities between Colombian, South African and German partners.

The project has facilitated the installation of UCT's first two permanent grid-tied solar PV systems on Upper Campus, marking an important milestone in the journey towards sustainability. The first system (13kWp) is invisible from ground level, hidden on the Chemical Engineering building rooftop. Together with a new weather station, this will allow for the solar yield potential of UCT's specific location to be better characterised. The second system (6kWp) consists of a two-bay PV carport situated at the north-end P6 parking lot. This highly visible structure will help raise awareness among the UCT community and also serve as one of UCT's first living labs within the broader VC's Khuseka Ikamva sustainability initiative.



Left to right - Back row: Mymoena Shaik, Manfred Braune, Josie McCann, Harro Von Blottnitz, Avi Dhevath, and Gerchen Herold.

Middle: Juan Pablo Cardenas, Lucy Gibbons, Iyaloo Akuaake and Eghsaan Matthew

Front: Richard Larmour and Curwin Nomdoe



Left to right: Richard Larmour, Manfred Braune, Curwin Nomdoe, Michelle Pressend, Eghsaan Matthew, Iyaloo Auaake, Avi Dhevath, Lucy Gibbons, Harro Von Blottnitz, Josie McCann, Juan Pablo Cardenas, Mymoena Shaik and Gerchen Herold

Faculty awards evening

The annual faculty awards evening took place on Thursday, 26 April, in the New Lecture Theatre. The guest speaker was Mr Luyanda Mpahlwa, Founder & Director of Luyanda Mpahlwa DesignSpaceAfrica, an Adjunct Professor at the UCT African Centre for Cities, and a member of the EBE Advisory Board. Mac Mokobane, a member of the EBE postgraduate student council, was the master of ceremonies for the evening, and Professor Alphose Zingoni handed out the prizes.



Luyanada Mpahlwa, Kai Goodall and David Oyedokun. Kai received a special faculty award for his social responsive and outreach projects.



Luyanda Mpahlwa handing the ECSA medal and certificate to Kristina Laugksch, the best student graduating with a BSc (Eng) in 2021.



Mac Mokobane, the MC for the night



Alphose Zingoni handing out a Klaus Jurgen Bathe Scholarship certificate to Alice Godlonton, one of the 6 recipients who received the scholarship



Mark Zuidgeest and Hilton Heydenrych attended the event in support of the students

School visits



Head of department, Manya Mooya, Karen Le Jeune and Warda Samaai represented the Department of Construction Economics and Management at a career exhibition in Kayamandi. The event was organised for Youth Day on 16 June 2022 by the Help A Girl Campaign NGO. Grades 10 to 12 learners and community members attended the event.



Teboho Mofokeng from the Department of Civil Engineering spoke to the 100Up learners who were attending a camp on campus. She had an interactive talk where she introduced the grade 11 and 12s to the world of engineering.

RISE programme

On Thursday, 27 July, a group of 120 people from the RISE programme were welcomed to UCT by the VC. The programme is an initiative of Schmidt Futures and the Rhodes Trust. Every year, the RISE programme selects 100 Global winners and provides them access to a lifetime of benefits as they work to serve others.

The 100 winners were divided into groups and could attend two sessions with academics in their labs across EBE and with Professor Sudesh Sivarasu in Biomedical Engineering. The EBE academics involved were Professor Sebastian Skatulla, A/Professors Dyllon Randall, Kirsty Carden, Amir Patel, Malebogo Ngoepe, and Drs Paul Amayo and Tokoloho Rampai. The programme ended off with an interactive session with the Dean.

